The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 6. (Cancelled)

7.   (Currently Amended) **A method for locating areas in a mask layout of an integrated circuit which are impacted by aberrations in projection printing comprising the steps of:**

   a)   generating a description of a mask layout wherein the layout is partitioned into rectangles and triangles,

   b)   generating a description of an aberration function wherein ~~The method as defined by claim 6 wherein~~ the description of the aberration function is modeled as producing spillover between mask openings with a localized pattern that is the inverse Fourier transform of the optical path difference function in the pupil of the projection printing system[[.]]**,**

   c)   sequentially comparing the aberration function to the mask layout geometry as the mask layout is scanned using an algorithm based on polygons in the mask layout, the polygons in the mask layout being partitioned into rectangles and triangles and the rectangles and triangles in the mask layout being compared with the aberration function, and wherein each pixel in a rectangle or triangle has a cumulative weight based on the pattern pixel weight in the rectangular or triangular region above and to one side of the weighted pixel, and including rank ordering all mask layout edges, corners, and other geometries according to degree of similarity to the aberration function, and

   d)   identifying any area in the mask layout tending to match the aberration function.

8.   (Original) The method as defined by claim 7 wherein step d) rank orders locations based on match factors of the layout geometry and the aberration function.

9.   (Original) The method as defined by claim 7 and further including step e) modifying the mask layout in response to identified matches with an aberration function.

10.   (Original) The method as defined by claim 9 wherein step b) includes generating descriptions of a plurality of aberration functions and step c) compares the plurality of aberration functions to the mask layout.

11.   (Currently Amended) The method as defined in claim [[1]] _7_ wherein step b) includes generating descriptions of a plurality of aberration functions and step c) compares the plurality of aberration functions to the mask layout.

12. - 14. (Cancelled)

15.   (Currently Amended) **A method for locating areas in a mask layout of an integrated circuit comprising the steps of:**
        a)   generating a description of a mask layout,
        b)   generating a description of a search pattern,
        c)   sequentially comparing the search pattern to the mask layout as the mask layout is scanned using an algorithm based on polygons in the mask layout, the polygons in the mask layout being partitioned into rectangles and the rectangles in the mask layout being compared to the description of the search pattern, and wherein ~~The method as defined by claim 14 wherein~~ each pixel in a rectangle has a cumulative weight based on the pattern pixel weight in the rectangular region above and to one side of the weighted pixel**, and**
        d)   identifying any area in the mask layout tending to match the search pattern.

16.   (Currently Amended) The method as defined by claim 15 wherein step c) rank orders all mask layout edges, corners, and other geometries according to degree of similarity to the search pattern.

17.   (Currently Amended) The method as defined by claim 16 wherein the description of the **search pattern is an** aberration function modeled as producing spillover between mask openings with a localized pattern that is the inverse Fourier transform of the optical path difference function in the pupil of the projection printing system.

18.   (Currently Amended) The method as defined by claim 15 wherein polygons are split into rectangles utilizing a core matching procedure.

19.   (Currently Amended) The method as defined by claim 18 wherein the polygons are split into rectangles, the entire input layout is partitioned into groups of rectangles, and the edges and corners are extracted from the rectangles and used to filter the match locations.

20.   (Currently Amended) The method as defined by claim 18 wherein step d) rank orders locations based on match factors of the layout geometry and the search pattern.

21.   (Currently Amended) The method as defined by claim 18 and further including step e) modifying the mask layout in response to identified matches with the search pattern.

22.   (Currently Amended) The method as defined by claim 21 wherein step b) includes generating descriptions of a plurality of search patterns and step c) compares the plurality of search patterns to the mask layout.

23.   (Currently Amended) The method as defined in claim **[[12]]** <u>15</u> wherein step b) includes generating descriptions of a plurality of search patterns and step c) compares the plurality of search patterns to the mask layout.

24.   (Currently Amended) The method as defined by claim **[[12]]** <u>15</u> wherein in step a) the mask layout is partitioned into rectangles and triangles and step c) compares rectangles and triangles in the mask layout to the description of the search pattern.

25.   (Cancelled)

26.   (Currently Amended) The method as defined by claim **[[25]]** <u>31</u> wherein the geometric patterns are lines in the images.

27.   (Currently Amended) The method as defined by claim **[[25]]** <u>31</u> wherein the geometric patterns include rectangles in the images.

28. – 30.   (Cancelled)

31.   (Currently Amended) ~~The method as defined by claim 25 wherein the images are handwriting~~ **A method for comparing one handwriting image to another handwriting image comprising the steps of:**

      a) generating a description of a first handwriting image,

      b) generating a description of a second handwriting image, and

      c) sequentially comparing the second image description to the first image description to identify areas of similarity or dissimilarity, the comparing being based on corresponding geometrical patterns in the first and second images.

32.   (Cancelled)

33.   (Cancelled)

34.   (Currently Amended) The method as defined by claim **[[33]]** <u>35</u> wherein the pixel values for a line are cumulatively weighted along the line whereby a weight for a line segment is obtained from a beginning pixel value and an end pixel value for the line segment.

35.   (Currently Amended) **In a process for comparing geometric shapes in a mask layout to a description of a search pattern, a method for defining the geometric shapes comprising the steps of:**

      a) cumulatively weighting pixels in each geometric shape ~~The method as defined by claim 33~~ wherein a pixel value for a rectangle has a cumulative weight based on pixel weight in the rectangular region above and to one side of the weighted pixel**, and**

      b) storing only the cumulative weights for selected pixels .

36.   (New) The method of claim 15 wherein the search pattern comprises rectangles extracted from an image.

37.   (New) The method of claim 15 wherein the search pattern comprises a collection of polygons.

38.   (New) A method for locating areas in a mask layout of an integrated circuit comprising the steps of:

      a)   generating a description of a mask layout,

      b)   generating a description of a search pattern,